

October 30, 1950.

Dr. M. Vogt,
Kerckhoff Laboratories
Caltech
Pasadena, Calif.

Dear Dr. Vogt:

Under separate cover I am sending you the following strains:

W-1033 = Cavalli's Hfr
W-1073 = W-1033 Lac- Mal- (double mutant; two steps)
W-1084 = W-1073 Lac+ reversion, still Mal-.

I am under the impression that the Lac and Mal mutations of these stocks are allelic to the Lac₁- and Mal₁- of W-1177, but am not certain. You can easily verify this yourself by crossing them.

The complete genotype of W-1177 is:

T-L-B₁- V₁^r Lac₁- Mal₁- Gal₄- Xyl- Mtl- Ar- S^r

The Gal₄- and Ar- phenotypes refer to slow, not negative, fermentation of d-galactose and l-arabinose respectively.

Dr. B. Davis's stocks of B-M- mutants from K-12 are identical. I believe that the biotin requirement is spared by methionine so as to make very difficult its direct demonstration in the double mutant, but have recovered B- recombinants in crosses on biotin-agar. Dr. Davis regards the requirement as lost. It makes very little difference for most purposes because B and M are fairly close together (no factors are known between them), and M- is remarkably stable, never having been observed to revert to M+.

I was not aware of the caution mentioned by Cavalli for the instability of Hfr, and cannot guarantee the present condition of the stocks sent. I have made a point of not making single colony isolations, so that part of the cultures at least should still be Hfr.

Sincerely,

Joshua Lederberg